ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCE

SCHOOL OF NURSING AND MIDWIFERY

DEPARTMENT OF NURSING AND MIDWIFERY

ADHERENCE TO ADJUVANT HORMONAL THERAPY AND ASSOCIATED FACTORS AMONG WOMEN WITH BREAST CANCER ATTENDING AT TIKUR ANBESSA SPECIALIZED HOSPITAL, ADDIS ABABA ETHIOPIA, 2019.

BY: ZERKO WAKO (BSc)

A RESEARCH THESIS SUBMITTED TO SCHOOL OF NURSING AND MIDWIFERY, COLLEGE OF HEALTH SCIENCE, ADDIS ABABA UNIVERSITY FOR PARTIAL THE FULFILMENT OF THE REQUIREMENT OF MASTER OF SCIENCE IN CLINICAL ONCOLOGY NURSING.

JUNE, 2019

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APPROVAL BY THE BOARD OF EXAMINATION

This thesis by Zerko Wako is accepted in its present form by the board of examiners as satisfying thesis requirement for the degree of masters in clinical oncology nursing.

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STATEMENT OF DECLARATION

By my signature below, I declare and affirm that this thesis is my own work. I have followed all ethical principles of scholarship in the preparation, data collection, data analysis and completion of this thesis. All scholarly matter that is included in the thesis has been given recognition through citation. I affirm that I have cited and referenced all sources used in this document. Every effort has been made to avoid plagiarism in the preparation of this thesis. This thesis is submitted in partial fulfillment of the requirement for a graduate degree from the Addis Ababa University at College of Health Sciences, School of Nursing and Midwifery. The thesis is deposited in the Addis Ababa University Digital Library and is made available to local, national and international scientific community. I solemnly declare that this thesis has not been submitted to any other institution anywhere for the award of any academic degree, diploma or certificate.

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ABBREVIATIONS AND ACRONYMS

AAU	Addis Ababa University
AET	Adjuvant Endocrine Therapy
AHT	Adjuvant Hormonal Therapy
AIs	Aromatase Inhibitors
OR	Odds Ratio
BC	Breast Cancer
CI	Confidence Interval
DC	Data Collector
ER+	Estrogen receptor Positive
ETB	Ethiopian Birr
HCP	Health Care Provider
HR+	Hormone Receptor Positive
MMAS-8	Morisky Medication Adherence Scale-8
OLR	Ordinal Logistic Regression
OPD	Outpatient Department
PgR+	Progesterone receptor Positive
PI	Principal Investigator
SD	Standard Deviation
SERMs	Selective Estrogen Receptor Modulators
SPSS	Statistical Package for the Social Sciences
TAM	Tamoxifen
TASH	Tikur Anbessa Specialized Hospital

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ABSTRACT

Background: Breast cancer is one of leading cause of morbidity and mortality in Ethiopia. Adjuvant hormonal therapy (AHT) is one of the treatment modality given for a patient with breast cancer with estrogen receptor positive after primary treatment for 5-10 years. Non-adherence to adjuvant hormone therapy in breast cancer survivors is common and associated with increased risk of recurrence of cancer, invade the other breast, and consequently increase morbidity and mortality.

Objective: To assess level of adherence to adjuvant hormonal therapy and associated factors among women with breast cancer who attends oncology outpatient at Tikur Anbessa Specialized Hospital.

Method: Institutional based cross-sectional study was conducted. Convenience sampling technique was used to select 216 participants. A semi-structured questionnaire was used after some modifications and Morisky Medication Adherence Scale (MMAS-8). Data were entered in EpiData version 4.4.2.1 and exported to SPSS version 24, and analyzed using ordinal logistic regression with OR and 95%CI.

Result: Out of 216, 209 women with breast cancer participated in the study with response rate of 97%. The level of adherence was 41%, 33%, and 26% for low, medium and high adherence respectively. Age group <45 is likely to be high adherence compared to >65 with (OR= 2.6, CI (3.8-7.6) p-value 0.001); being from urban (OR= 1.5, CI (1.1-2.8, p-value 0.001); being on tamoxifen (OR= 1.6, CI (0.4-2.2), p-value 0.005); having side effect (OR= 1.5, CI (0.4-1.9), p-value 0.004); comorbidity (OR= 1.6, CI (1.5-3.4, p-value 0.001) and Getting a thorough therapeutic communication (OR= 1.7, CI (1.2-3.2), p-value 0.001) were found to be significantly associated with adherence to AHT.

Conclusions and recommendations: In summary, the high adherence level to AHT among women with breast cancer was 26% in Tikur Anbessa Specialized Hospital. Age, place of residence, types of AHT, side effect, comorbidity, therapeutic communication from health care providers were significantly associated with adherence. Healthcare provider should give health education concerning medication usage, management of side effects and should also give due attention to rural patient.

Key words: Adherence, Adjuvant Hormone Therapy, Breast Cancer, Ethiopia

1. INTRODUCTION

1.1. Background of the study

Breast cancer is the most frequently diagnosed cancer and the leading cause of cancer death among females worldwide with an estimated 1.7 million cases and 521,900 deaths in 2012(1) accounting for one fourth of total cancer cases and 15% of all cancer related mortalities (1, 2). Breast cancer is an important public health issues, not only in the developing world but also in resource limited nations including Ethiopia (3). In Ethiopia, according to the Addis Ababa cancer registry breast cancer is one of the top leading cause of cancer mortality, with the prevalence of 32% (4)**.** For the commencement of adjuvant hormonal therapy patient need to undergo a test called hormone receptor status it determine survival status of the patients with breast cancer (5). Some studies in Eastern African countries like Kenya, Uganda and Tanzania on breast cancer their receptor status showed that 27%, 51%,40% were hormone receptor positive (ER+/PR+) and 31%, 36%, 49% were hormone receptor negative (ER-/PR-) respectively (3, 6, 7). However, in Ethiopia out of the 40% with known hormone receptor status, the vast majority (71%) of women with breast cancer were hormone receptor positive (8). Similarly on other studies conducted at Tikur Anbessa Specialized Hospital showed that two-third of BC were hormone receptor positive (ER+/PR+) and one-third of BC were ER-negative BC, But hormone receptor staining is not often available in Ethiopia due to limited resources (5, 9, 10). According to study conducted on the treatment of cancer in sub-Saharan Africa, Tamoxifen is an effective anticancer agent that is more affordable than chemotherapies and can be used to treat hormone-responsive cancers (11).

Advancement in diagnosis and treatment of breast cancer (BC) have reduced the risks of cancer recurrence and increases survival rates in women with breast cancer (12). Hence, substantial improvement were recorded over the past 25 year in the care of breast cancer (13). Adjuvant hormonal therapy (AHT) is a form of systemic therapy given after primary treatment (chemotherapy, radiotherapy, and surgery) for 5 to 10 years. It includes selective estrogen-receptor modulators (SERM) (e.g., tamoxifen, raloxifene) and aromatase inhibitors(AIs) (e.g., Anastrozole, letrozole, and exemestane) used to prevent breast cancer recurrence, development of cancer in other breast, improve outcome and improve quality of life in premenopausal and postmenopausal women respectively in the curative or palliative setting (14, 15). Like other

chronic disease, breast cancer patient were on adjuvant hormonal therapy for long term 5 to 10 year. Variety of adherence measuring method has been used including self-report questionnaires, telephone interviews, and manual drug counting (2). However, the 8-item Morisky Medication Adherence Scale (MMAS-8) was validated across various chronic disease in out-patient setting (16).

Different factors are reported to have influence to high or low adherence, which is one of the important reason for success or failure of adjuvant hormonal therapy since breast cancer patient has long term oral hormonal therapy for 5-10 years(17). These factors includes social support, cognition, personal beliefs and treatment complexity; multiple medications/dosing schedule, multiple providers, and cost (18). On the other hand patient-related factors, therapy , healthcare system, socioeconomic and disease-related factors were found to be associated with adherence (19). A number of patient-related, illness-related, and treatment-related factors have been shown to affect nonadherence to both tamoxifen and (AIs) for instance anastrozole but with varied results (20).However, in a study done in an African population, financial constraints and side effects were the most viable reasons for nonadherence (21).

1.2. Statement of problem

Adherence is an important issue for oral therapy for breast cancer (22).Despite the effectiveness of the medication, rates of adherence to hormone therapy among BC patients have been reported to be relatively low, ranging from 41 to 72 % measured after completion of 5 years of treatment in clinical settings (23, 24). Adherence to AHT in clinical practice is only about 50% of women successfully completing 5-year therapy, thus which is one of the most challenging problem since the patient are not closely monitored for adherence (2, 25). One in every two women did not adhere to regimen despite the efficacy of adjuvant hormonal therapy in improving breast cancer outcomes (26). Therefore, adherence issues is one of the most challenging issues in clinical practice. On the other hand, Nonadherence may include irregular intermittent use, using other than the prescribed dosage and/or early discontinuation have been reported to lead to greater recurrence rates and negatively influence survival (12, 27). Non-adherence rates in cancer patients ranges between 16 and 100%, which illustrates a serious public health problem (28).

Adjuvant hormonal therapies (AHTs) are tamoxifen and aromatase inhibitors (AIs) have proven clinical benefit, reducing the risk of recurrence for women with estrogen receptor positive breast cancer by 11.8% and mortality by 9.2% over 5 years (29). Similarly, another study showed adjuvant tamoxifen reduces the risk of recurrence and breast cancer mortality by 40% and 33% respectively, among women with estrogen receptor-positive early stage breast cancer when appropriately taken for 5 year by adhering to provider's recommendation (30, 31). Adherence rates differs with follow up status and types of hormonal therapy; for instance, adherence rate of tamoxifen was 79% to 65% for first and fifth year and for AIs was 80% to 72% for fist and fifth year (32). Therefore, adherence level decrease with increasing duration of treatment because of adverse effect.

To address adherence problem different measures have been undertaken; improving communication between the HCPs and the patients, and should also focus on strategies to minimize side effects to improve patient outcomes in this vulnerable population. However, tackling issues like patient-providers communication and side effects of therapy is corner stone for women with breast cancer with low-income (23, 33, 34). Similarly, some studies suggested that lack of knowledge on medication and its side effects, skills on self-management, poor patient–provider communication and lack of health care coverage in a poor population leads to

nonadherence (35, 36). Furthermore, some study suggested that formulation of policies and interventions to investigate factors that lead to a low adherence will have the most impact at improving breast cancer outcomes (31). Nurses plays a crucial role addressing the problem of adherence by helping patients find financial aid to fill prescriptions, manage side effects, improve self-management of comorbidities, facilitate the patient/ provider relationship, and help patients identify strategies to address forgetfulness or change perceptions and beliefs (19).

Even though most of our literature was conducted outside showed significant variations in adherence to AHT. In fact there is limited study in Africa on factors affecting adherence level to AHT among women with breast cancer, Ethiopia is not exception. This study, therefore, aimed at determining the level of adherence and associated factors on adjuvant hormonal therapy among women with breast cancer attending Tikur Anbessa Specialized Hospital, oncology OPD.

1.3. Significance of the study

Like other chronic illnesses Diabetes (85.1%)(37), tuberculosis (75.3%)(38) and HIV/AIDs (88.2%)(39) which is already known, but even breast cancer patient goes through long term oral hormonal therapy for five to ten year. However, the issue of adherence rate is under question yet neglected, even though it has been surrounded by many factors like socio-economic, treatment related, illness related, patient related and system related. However, the magnitude of adherence to adjuvant hormonal therapy and factors affecting women with breast cancer is unknown. Unlike other chronic disease, adherence level will be affected starting from the time diagnosis their throughout treatment trajectory. Therefore, understanding adherence to adjuvant hormonal therapy is very important in routine clinical settings because it will not easy for close monitoring of the patient since they took the medication at home.

The result from this study will be used by Health care providers like Nurses (oncology nurses), medical oncologist, and administrators, pharmacist, drug store manager and patient and family on adherence to adjuvant hormonal therapy, such information would assist health care professionals to closely monitor and manage adherence related problem accordingly.

Moreover, the result of this study could be used as a base line data to other like researchers and voluntary institutions who are interested in studying this topic. Lastly, it would also assist policy makers to develop context specific and relevant policies to address factors most influential at low levels of adherence and assist in developing adherence counselling manual for breast cancer patient on adjuvant hormonal therapy.

2. LITERATURE REVIEW

The literature review is an important component of research because it reveals knowledge on a given topic. It guides the choice of a sound conceptual framework suitable for the research in question while exposing the researcher to the fundamental issues concerning the topic. This chapter is centered on adherence to adjuvant hormonal therapy and factors affecting it and arranged based on topically order.

2.1. Adherence to adjuvant hormonal therapy

A cross sectional study done in Rome on adherence to hormone therapy among 151 Italian women with breast cancer showed that the average adherence rate of 6.18(2). Another study conducted in Rome on adherence to oral endocrine therapy revealed that 40% was non-adherence (37). A cross-sectional study done in Singapore on 157 women who have started oral adjuvant endocrine therapy at least 6 months revealed that adherence rate of 40.8% (35). A population based study done (2018) in Sweden on 488 patients and 271 patients who had been treated for 3 years and 5 years showed that 91% and 92% were adherent adjuvant endocrine therapy respectively (38). A retrospective cross-sectional study done in Brazil showed that adherence to hormone therapy among women rate was 76.3% (39). A prospective cohort study done on 3382 women from 2005 to 2013 conducted at Northern California showed that 2687 (79%) initiated treatment with AET out of these, 649 (24%) discontinued AET and 581 (22%) were non-adherent (40). A study done by yang et al 2016 on 36,149 breast cancer patient, the average adherence to these medications before and after BC treatment was 91.4% and 77.9% adherent respectively (41).A study done in Nigeria at Lautech teaching hospital 2015 on non-adherence among 114 breast cancer patients who were on tamoxifen in the first year revealed that 25% of the patient were non-adherent to tamoxifen (21)

2.2. Factor associated with adherence to adjuvant hormonal therapy

2.2.1. Socio-demographic/patient related factors

A descriptive study done in Rome as cited that the patients whose age is less than 45 years (younger patients) and whose age is greater than 85 years (very elderly) adhere less to tamoxifen compared to those aged within this interval [45-85] years (2). Similarly, a study conducted at Scotland reported younger women were more likely to have low adherence (42). Another study done in Sweden showed that unmarried women are likely to be less adherent to therapy than married women (12). Similarly, A study done in Rome by Laura Iaccorossi et al, 2016 found that being married or living in defacto relationships is conducive for adherence (2). Another study conducted among all Latin women on adjuvant hormonal therapy revealed that regarding educational level women with less than a high school education were less likely to discontinue therapy compared to those with a college education or beyond and regarding family history; with a first-degree relative were more likely to discontinue therapy compared to those with no family history (43).

2.2.2. Disease related factors

A study done in Nigeria at LAUTECH teaching hospital 2015 on non-adherence among 114 breast cancer patients, regarding stage of BC, nonadherence rate varied with the disease stage and was 16.7%, 11.7%, 23.5% and 30.7% for AJCC stage I, II, III, and IV patients respectively thus non adherence rate increases as disease advanced, although this was not statistically significant (21). Similarly, study done in Ireland regarding comorbidities diabetes, respiratory, cardiovascular diseases, Parkinson diseases and dementia was 4.2%, 13.7%, 21.3%, 2.9% and 0.9% respectively; 32.3% of women in the study cohort had at least 1 of these comorbidities (44). Presence of multiple comorbidities (45). Similarly, study done in Singapore found that only the number of comorbidities was found to be an independent predictor of adherence in a multiple logistic regression analysis (35). Another study done in Nigeria at Lautech Teaching Hospital 2015 regarding comorbid illnesses diabetes mellitus, hypertension, heart failure are the reason for non-adherence to tamoxifen (21)

2.2.3. Treatment related factors

Nonadherence was primarily associated with persistent and unmanageable side effects from hormonal therapy these are the most commonly reported side effects which are associated primarily with tamoxifen are hot flashes and night sweats whereas bone loss, and joint and muscle pain are associated primarily with Aromatase Inhibitors (34).Similarly, management of vasomotor symptoms also helps with adherence to long-term treatment for both tamoxifen and AIs (46). A study done by Laura Iaccorossi et al, 2016 found that the side effect of difficulty in concentrating and memory significantly associated between adherence and level of education (2). According, study conducted in California hormone therapy adverse effects and patients' negative beliefs about hormone therapy have also been identified as being associated with nonadherence (24, 33). Regarding side effects of adjuvant hormonal therapy and the most common side effects reported were hot flushes, joint ache or pain, weight gain, fatigue and tiredness, and depression/low mood, vaginal dryness and vaginal discharge, lack of concentration, low esteem and low confidence, and low libido (47). Similarly, study in Nigeria at Lautech teaching hospital 2015 on non-adherence among 114 breast cancer patients regarding side effects hot flushes, nausea/vomiting, vaginal bleeding, irregular menstruation are the reason for nonadherence to tamoxifen (21). Regarding types of surgery women who received breast conserving surgery(BCS) alone compared to mastectomy (43). Regarding follow up status, a study done in Belgium on 31 patients at university hospital was 17%, 30%, 45%, 50% and 60% for first year, second year, third year, fourth year and fifth year respectively (48)

2.2.4. Healthcare system related factors

Having no health insurance and experiencing side-effects from hormone treatment were barriers for adherence. Patient centered communication in patient–physician interaction were significantly associated with patient adherence to ongoing TAM/AI therapy among low-income women with BC (33). Another study done in United States showed that higher out-of-pocket costs for Adjuvant endocrine therapy (AET) medication were consistently associated with lower adherence (31). A qualitative study which was done on adjuvant endocrine therapy to explore that provision of timely expert information about AET, supportive relationships with health professionals and family members are factors that influenced continued adherence (29)

2.3. Conceptual framework

Conceptual framework was developed from literature (2, 50, 52, 53)

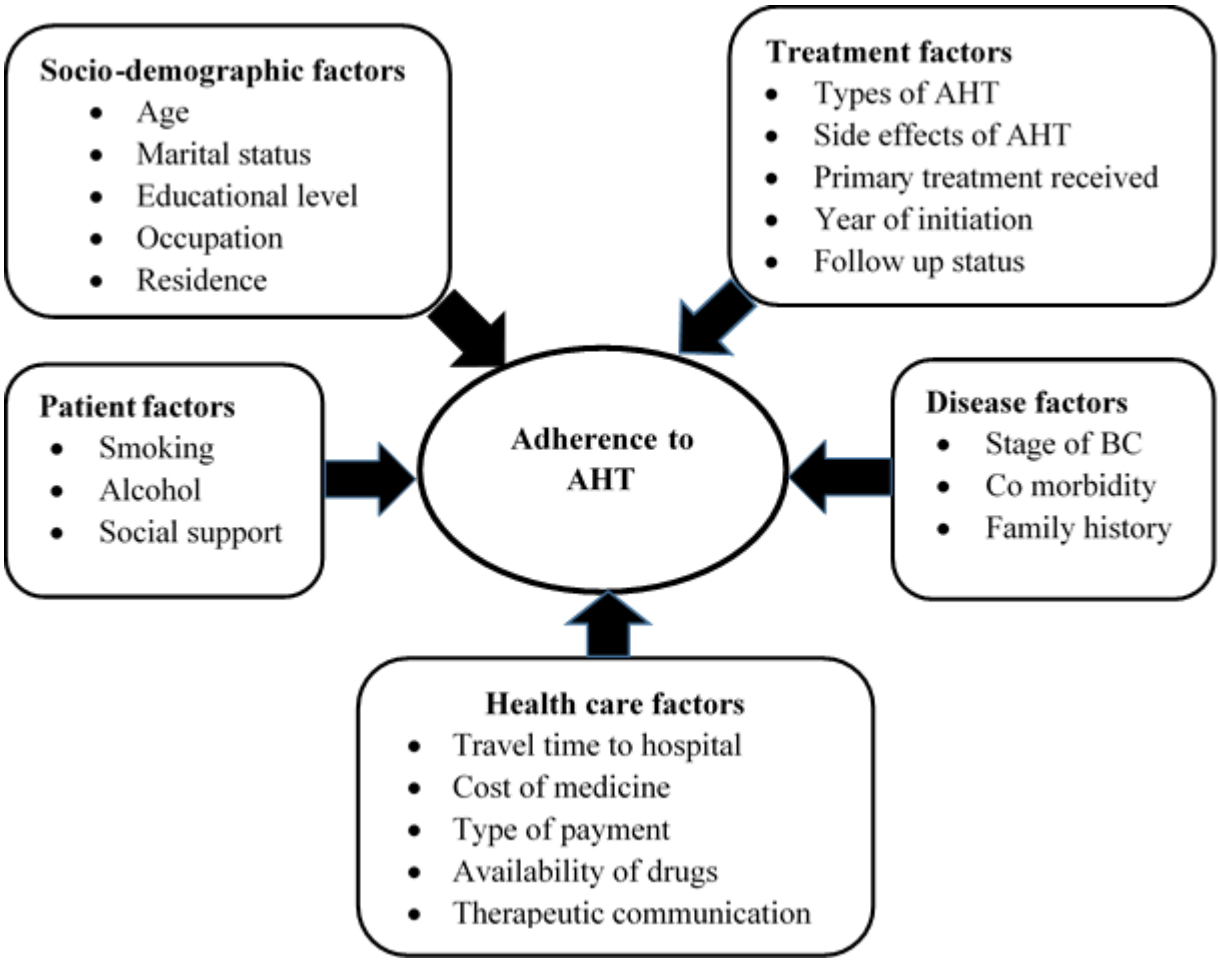

Figure 1.Schematic representation of conceptual framework on adherence to AHT and associated factor among women with breast cancer attending oncology unit at Tikur Anbessa Specialized Hospital, Addis Ababa Ethiopia, 2019.

3. OBJECTIVES OF THE STUDY

3.1. General objective

- To assess adherence to adjuvant hormonal therapy and associated factors among women with breast cancer attending at Tikur Anbessa Specialized Hospital, Oncology unit, Addis Ababa, Ethiopia, 2019.

3.2. Specific objectives

- To determine level of adherence to adjuvant hormonal therapy
- To identify factors associated with adherence to adjuvant hormonal therapy

4. METHODOLOGY

4.1. Study area and period

4.1.1. Study area

Study was done at Tikur Anbessa specialized hospital (TASH) which is found in Addis Ababa City, Lideta Sub City. The Hospital currently had 800 beds of which 19 were devoted for oncology patients from these two beds are for emergency oncology patient. According to the registry in the unit, more than 10,000 cancer cases were seen in this hospital per year. This hospital worked as the nation's sole cancer referral center and has given radiotherapy, chemotherapy, concurrent cancer treatment services and palliative care for patients with cancer. In TASH oncology unit with a total numbers of staffs (health care workers) were about 60. Before thirty two nurses were dedicated in the oncology unit. Currently the hospital have nine oncology nurses specialist; three were males and six were females. The most common cancer cases seen in this hospital were breast, cervical and sarcomas. This study was taken place at the oncology unit which is one of the specialty units of the hospital.

4.1.2. Study period

Study was conducted from March to April, 2019.

4.2. Study design

Institutional based cross sectional study was conducted

4.3. Population

4.3.1. Source population

All women diagnosed with breast cancer in Tikur Anbessa Specialized Hospital, oncology unit.

4.3.2. Study population

Eligible women diagnosed with breast cancer that are available during the data collection period.

4.3.3. Sample population

Breast cancer women to whom actual data collections were done

4.4. Eligibility criteria

4.4.1. Inclusion criteria

Female patients age greater than or equal to 18, who was diagnosed with breast cancer and have been receiving adjuvant hormonal therapy for at least 6 month were included.

4.4.2. Exclusion criteria

Those who are Inpatient, with cognitive impairment or medical condition that could prevent them from actively participating in interview, and women who have been receiving adjuvant hormonal therapy for less than 6 month were excluded.

4.5. Sample size determination and sampling technique

4.5.1. Sample size determination

To determine the sample size assuming number of the study subjects as n, the standardized normal distribution curve value for 95% confidence level (1.96), taking 50% of proportion because no previous similar study on adherence to adjuvant hormonal therapy and associated factors among women with breast cancer, and taking the margin of error to be 5%. And applying single population proportion formula for a cross-sectional survey, the sample size was 384.

Z = 1.96 P = 0.5 d = 0.05

n= $((z/2)^2 P(1-p))/d^2 = ((1.96)^2 0.5(0.5))/((0.05)^2) = 384$

Since flow of patients during data collection period was less than 10,000, then correction formula was applied.

Solution: $nf = (n \times N)/(n+N) = ((384 \times 398))/((384+398)) = 196$

Where, nf =desired sample size, n= the calculated sample size and N= total population. After adding 10% non-response rate the final sample size was **216**

4.5.2. Sampling techniques

Data was collected by using convenient sampling techniques for selecting women with breast cancer therapy on adjuvant hormonal therapy those who were available during the data collection period.

4.6. Data collection tool and Technique

4.6.1. Data collection tool

Data was collected using a pre-tested and semi-structured questionnaires was used. Questionnaires incorporated; socio-demographic/patient, Disease-related, medication-related, health care system related variable and Morisky Medication Adherence Scale-8 (MMAS-8). It consists of eight items, with a scoring scheme of "yes"=0 and "no"=1 for the first seven items, to avoid yes saying bias, item 5 response was inverted for "yes"=1 and "no"=0 by the author but for the last item a five-point Likert scale response were used with options of "never," "once in a while," "sometimes," "usually," and "always." In this Likert scale, values ranging from 0 to 1 were given at a specified interval of 0.25 with "0" given for "never" and "1" given for "always." Scoring with (<6) low adherence, medium (6-8) and (8) high adherence (2). The question will be translated in to Amharic by expertise in both language before, and translated back to English after data collected to ensure its consistency.

4.6.2. Data collection technique

The data collection procedure included patient interview and chart review using a semi-structured questionnaire. Patient interview were interviewed using a questionnaire after they were seen by their physician and got their medication from pharmacy. From the patient health record information like stage of disease, types of breast cancer, types of surgery, time of initiation, and hormone receptor status were obtained. And in addition prescription paper were seen to know types of drug. To do this 3 data collectors (BSc) and one supervisor (MSc) were assigned after taking one day training, and the data collection process were supervised by the principal investigator.

4.7. Data quality management

To ensure data quality, pretest was done at Hawassa Referral Hospital by taking 5% of the study sample. The tool was further tested for content validity through expert judgment. Training were given by principal investigator for one days for data collectors and supervisors. In addition each data collector checked the questionnaire from each study participant for completeness on daily basis. The Supervisor and Principal Investigator reviewed each questionnaire daily and checked for completeness and was then edited; the necessary feedback were given to the data collectors in the next morning. Codes were given to the questionnaire and participant during data collection so that any identified errors could get traced back using the codes.

4.8. Data processing and analysis

Data was first checked, sorted, categorized, coded and entered in to computer using Epidata version 4.4.2.1 and transferred to SPSS version 24. After completion of data entering, it was then cleaned before analysis. Significance was determined using beta estimate (β) and p-value with 95% confidence intervals. To assess the association between the different predictor variables with the dependent variable, first bivariate analysis were conducted between each independent variable and outcome variable, those eligible with P-value <0.2 were then entered in multivariate analysis, those variables with a p – value < 0.05 with a 95% confidence interval was regarded as significant factors using an ordinal logistic regression. The result was presented in frequencies and cross tabulations was used to summarize descriptive statistics of the data and tables and graphs were used for data presentation.

4.9. Variables of study

4.9.1. Dependent variable

Adherence to AHT

4.9.2. Independent variables

Socio-demographic/patient factors: age, income, marital status, education level, place of residence, social support, smoking, alcohol

Treatment related factors: types of AHT, side effect of AHT, year of initiation, primary treatment received, follow up status

Disease related factors: comorbidity, stage of breast cancer, laterality of the cancer, family history

Health care system factors: distance from institution, cost of medicine, availability of drug, therapeutic communication, types of payment.

4.10. Operational Definition

Low Adherence: participant who scored <6 points in the MMAS-8.

Medium Adherence: participant who scored 6-8 points in the MMAS-8 questions.

High adherence: participant who scored 8 points in the MMAS-8(2).

4.11. Ethical Consideration

Ethical clearance was obtained from School of nursing and midwifery. After receiving ethical clearance a letter of cooperation was written by TASH to oncology unit to get permission to conduct this research in the hospital. An informed consent was obtained from participants who gave verbal consent to participate in the interview. Participant who refused to participate in the survey was not be forced to participate in the study. Each study participant was informed about the objective of the study and confidentiality of the information which they gave. In addition, they were told that they have full right to withdraw from the study at any time if they feel that uncomfortable.

4.12. Dissemination of Results

The findings of this study will be presented and submitted to department of nursing and midwifery, school of nursing and midwifery, College of Health Sciences, Addis Ababa University. In addition, it will be presented in different seminars and attempts will also be made to publish like Federal Ministry of Health, Addis Ababa City Administration Health Bureau, Tikur Anbessa Specialized Hospital. Furthermore, the finding will be presented on appropriate seminars, conferences and workshops and will be published with scientific journals.

5. RESULT

5.1. Socio-demographic characteristics

Among the respondent, 88(42.1%) were in age less than 45, 121(57.9%) were urban dwellers, 53(25.4%) were unable to read and write, 139(60.8%) were married, Orthodox 139(66.5%) by faith, Amhara 82 (39.2%) by ethnicity and 120 (57.4%) were house wife by occupation.

Table 1 Socio-demographic characteristics of women with breast cancer attending oncology unit at Tikur Anbessa Specialized Hospital, Addis Ababa Ethiopia, 2019 (n = 209).

Variable		Frequency(n)	Percentage (%)
Age of respondent			
	<45	88	42.1
	45-65	71	34.0
	>65	50	23.9
Place of residence			
	Urban	121	57.9
	Rural	88	42.1
Educational status			
	Unable to read and write	53	25.4
	Primary education	53	25.4
	High school and above	103	49.3
Marital status			
	Single	33	15.8
	Married	127	60.8
	Widowed	36	17.2
	Divorced	13	6.2
Religion			
	Orthodox	139	66.5
	Muslim	38	18.2
	Protestant	23	11.0
	Catholic	9	4.3
Ethnicity			
	Amhara	82	39.2
	Oromo	63	30.1
	Gurage	34	16.3
	Tigre	21	10.0
	Others[1]	9	4.4

[1] Silte, Gamo, Gofa, Wolayta, Anyuak

5.2. Patient related factors

Among the respondent, 207 (99.1%) of the study participants had no smoking habit and 205 (98.1%) never drank alcohol before and 140(67%) were supported by others (Table 2).

Table 2: Patient related variables of women with breast cancer that attended oncology unit at Tikur Anbessa Specialized Hospital, Addis Ababa Ethiopia, 2019 (n = 209).

Variable	Frequency(n)	Percentage (%)
Smoking		
Yes	2	0.9
No	207	99.1
Alcohol		
Yes	4	1.9
No	205	98.1
Do you get supporter		
Yes	140	67.0
No	69	33.0

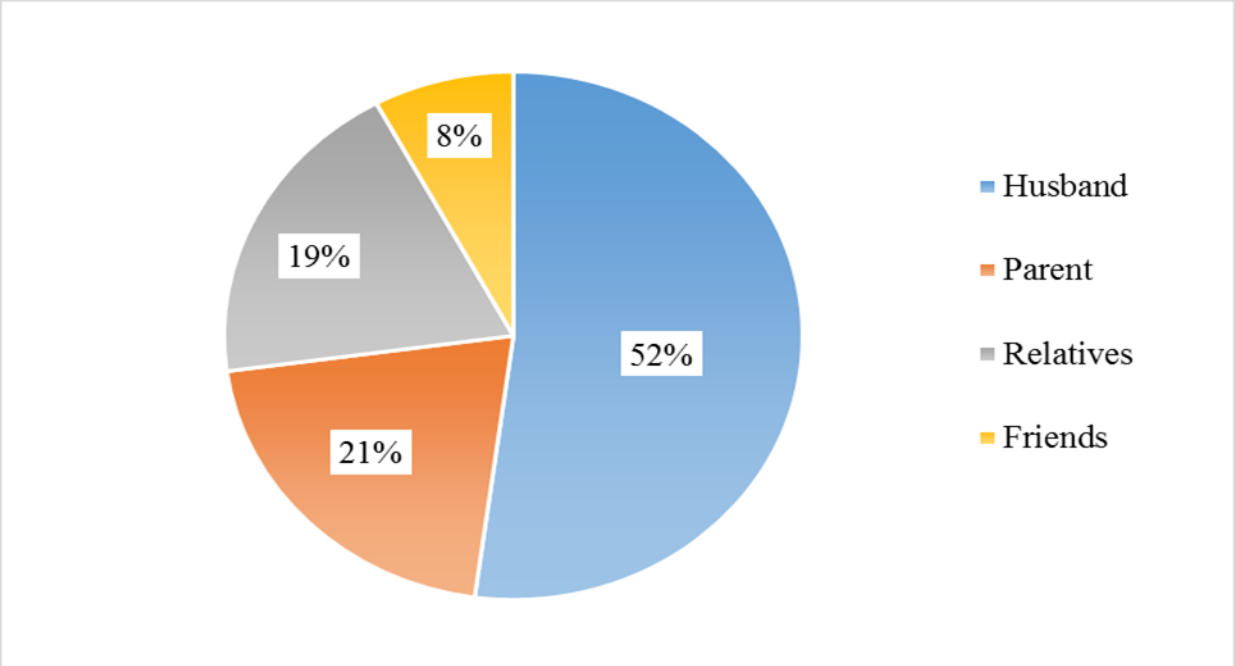

Figure 2: Pie chart showing supporter for women with breast cancer that attending oncology unit at Tikur Anbessa Specialized Hospital, Addis Ababa Ethiopia, 2019 (n = 209).

In the above pie chart, social support; among the respondent 73(52%) were supported by husband, 29(21%) by parent, 27 (19%) by relatives, and 11(8%) by friends (figure 2).

5.3. Disease related factors

Among the respondent, 190(90.9%) has no family history, 92(44%) with stage 3 at diagnosis, 143(68.4%) were post-menopause women, 186(89.0%) with unknown receptor status, A respondent who received chemotherapy, surgery and radiotherapy were 194(92.8%), 188(90.0%) and 51 (28.2%) respectively, 189 (90.4%) undergone mastectomy, 159 (76.1%) have no comorbidity (Table 3).

Table 3 Disease related variables of women with breast cancer attending oncology unit at Tikur Anbessa Specialized Hospital, Addis Ababa Ethiopia, 2019 (n = 209).

Variable		Frequency(n)	Percentage (%)
Family history			
	Yes	19	9.1
	No	190	90.9
Types of breast cancer			
	Ductal	187	89.5
	Lobular	22	10.5
Stage at diagnosis			
	Stage 1	18	8.6
	Stage 2	40	19.1
	Stage 3	92	44.0
	Stage 4	59	28.0
Menopausal status			
	Pre-menopause	66	31.6
	Post-menopause	143	68.4
Hormone receptor status			
	Positive	23	11.0
	Unknown	186	89.0
Laterality of the cancer			
	Unilateral	205	98.1
	Bilateral	4	1.9
Chemotherapy			
	Yes	194	92.8
	No	15	7.2
Surgery			
	Yes	188	90.0
	No	21	10.0
Radiotherapy			
	Yes	51	28.2
	No	158	71.8
Types of surgery			
	Mastectomy	189	90.4
	Lumpectomy	20	9.6
Comorbidity			
	Yes	50	23.9
	No	159	76.1

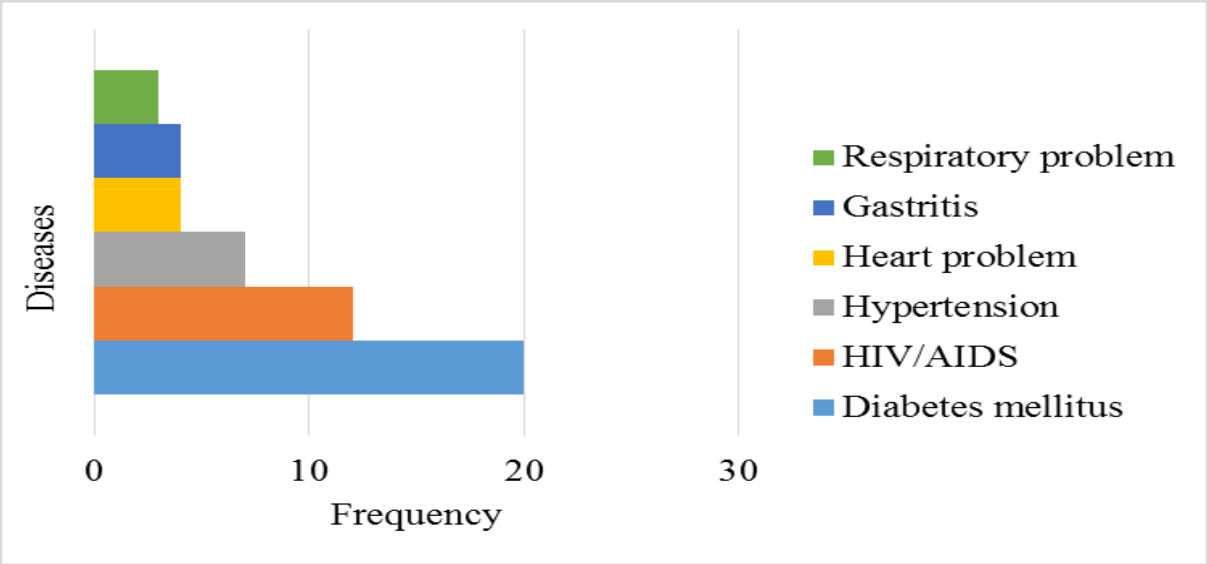

Figure 3: Bar charts showing types of comorbidities among women with breast cancer attending oncology unit at Tikur Anbessa Specialized Hospital, Addis Ababa Ethiopia, 2019 (n=209).

In the above figure 3, regarding comorbidity; 20(40%) were known diabetes mellitus, 4 (8%) heart problem, 12(24%) HIV/AIDS, 3(6%) respiratory problem, 7(14%) hypertension and 4(8%) gastritis.

5.4. Medication related factors

Among the participant, 118(56.5%) were on tamoxifen, 69(29.7%) were started their medication in the year 2011, 89(42.6%) were presented with stage 3, 122 (58.4%) did not experienced side effects, 112(53.6%) were getting their medication free of charge, 110(52.6%) having follow up of 1 year. (Table 4)

Table 4: Medication related variables of women with breast cancer that attending oncology unit at Tikur Anbessa Specialized Hospital, Addis Ababa Ethiopia, 2019 (n = 209).

Variable		Frequency(n)	Percentage (%)
Types of drugs			
	Tamoxifen	118	56.5
	Anastrozole	91	43.5
Year of initiation			
	2007	36	17.2
	2008	24	11.5
	2009	29	13.9
	2010	58	27.7
	2011	62	29.7
Stage at diagnosis			
	Stage 1	17	8.1
	Stage 2	34	16.3
	Stage 3	89	42.6
	Stage 4	69	33.0
Side effects			
	Yes	87	41.6
	No	122	58.4
Types of payment			
	Free of charge	112	53.6
	Out-off-pocket money	66	31.6
	Medical insurance/third party	31	14.8
Follow up status			
	1 year	110	52.6
	2 year	38	18.2
	3 year	20	9.6
	4 year	24	11.5
	5 year	17	8.1

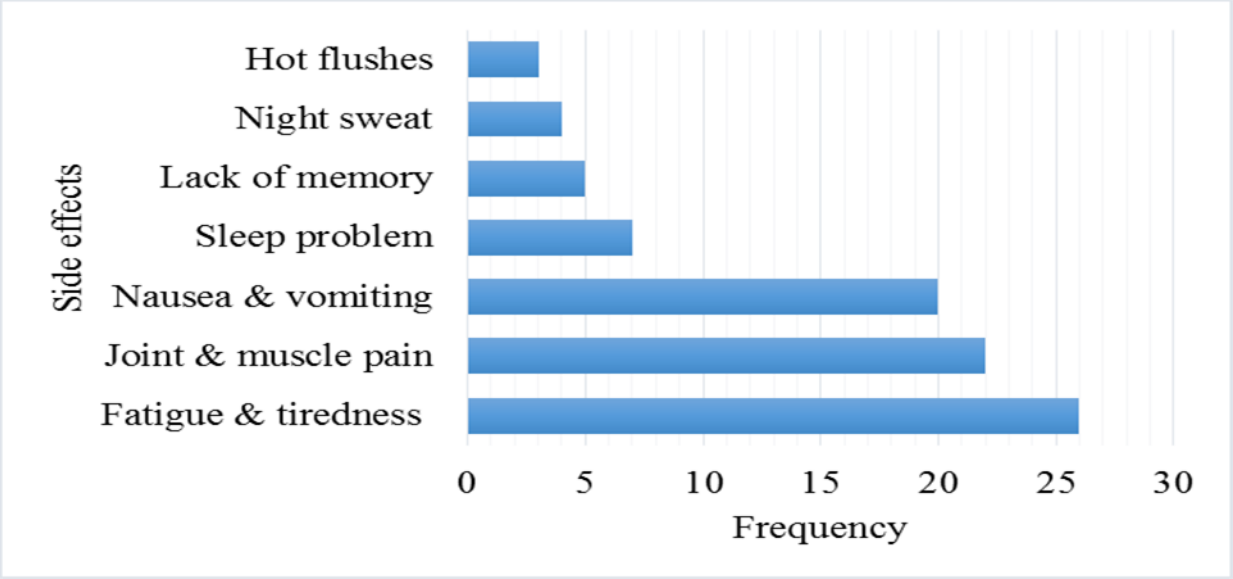

Figure 4: Bar charts showing side effects of AHT among women with breast cancer attending oncology unit at Tikur Anbessa Specialized Hospital, Addis Ababa Ethiopia, 2019 (n=209).

The above figure 4, show the commonly experienced side effects of AHT; 20(23%) nausea and vomiting, 26(30%) tiredness and fatigue, 22 (25%) joint and muscle pain, 4(5%) night sweat, 3(3%) hot flushes , 7(8%) sleep problem, and 5(6%) lack of memory.

5.5. Health care system related factors

Among the respondent, 136 (65.1%) reported adjuvant hormonal therapy is not available, 151 (72.2%) have got thorough therapeutic communication from health care provider, 102(48.8%) took more than 7 hours to reach hospital (table 5)

Table 5: Health care system related factors of women with breast cancer that attending oncology unit at TASH, Addis Ababa Ethiopia, 2019 (n = 209).

Variable	Frequency (n)	Percentage (%)
Availability of adjuvant hormonal therapy		
Yes	73	34.9
No	136	65.1
Did you get thorough therapeutic communication from HCP?		
Yes	151	72.2
No	58	27.8
Travel time to hospital		
< 3hour	31	14.8
3-6 hours	76	36.4
>=7 hours	102	48.8

5.6. Level of Adherence to adjuvant hormonal therapy

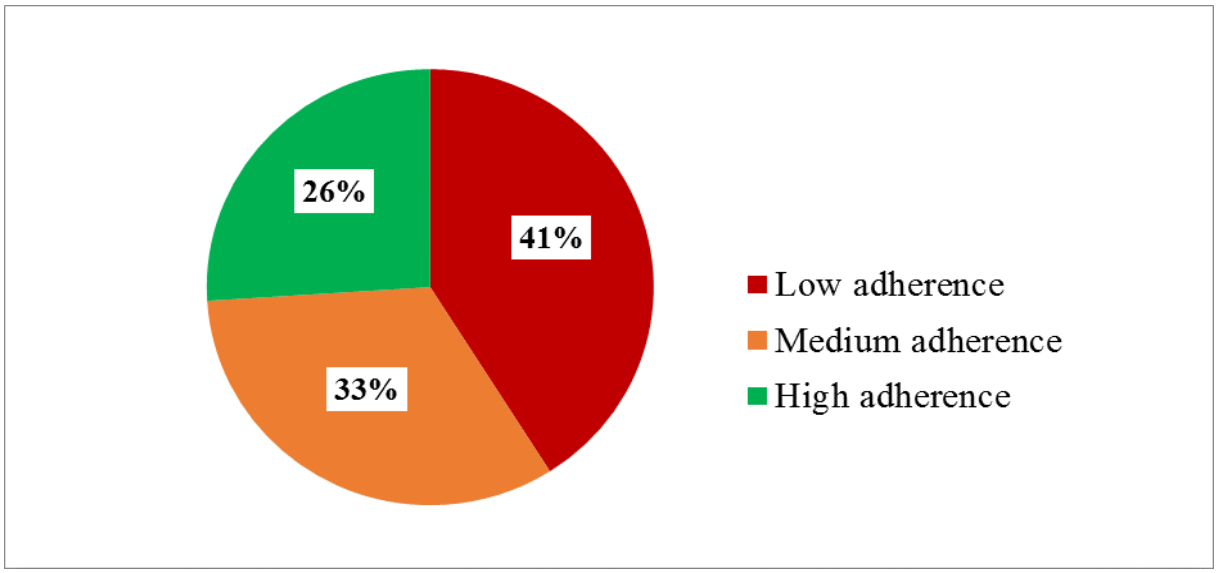

Figure 5: Pie chart showing level of adherence to adjuvant hormonal therapy among women with breast cancer attending oncology unit at Tikur Anbessa Specialized Hospital, Addis Ababa Ethiopia, 2019 (n = 209).

Above figure 5 show, the overall calculated adherence level in this study was 41%, 33%, 26% for low, medium and high adherence respectively.

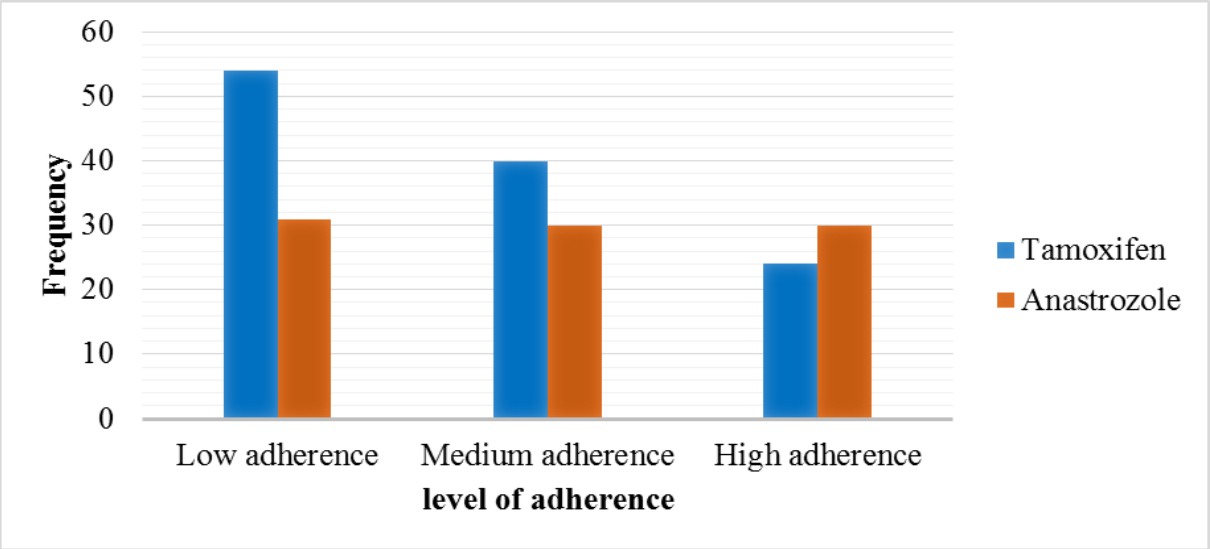

Figure 6: Bar chart showing relationship between level of adherence and types of AHT among women with breast cancer that attending oncology unit at Tikur Anbessa Specialized Hospital, Addis Ababa Ethiopia, 2019 (*N* = 209).

The above bar chart illustrated the proportion of types of adjuvant hormonal therapy and its level of adherence to AHT. Among the respondent, those who are on anastrozole have higher proportion than tamoxifen in high adherence level.

5.7. Factors associated with adherence to adjuvant hormonal therapy

Age <45 have (OR= 2.6, CI (3.8-7.6) p-value 0.001); patient who came from urban (OR= 1.5, CI (1.1-2.8), p-value 0.001); having comorbidity (OR= 1.6, CI (1.5-3.4), p-value 0.001); getting a thorough therapeutic communication (OR= 1.7, CI (1.2-3.2), p-value 0.001);having been experienced side effects (OR= 1.5, CI (0.4-1.9), p-value 0.004); regarding types of AHT being on tamoxifen are (OR= 1.6, CI (0.4-2.2), p-value 0.005); were found to be significantly associated with adherence level in an ordinal logistic regression (Table 6).

Table 6: Bivariate and multivariate analysis for factors associated with adherence to AHT among women with breast cancer attending oncology unit at Tikur Anbessa Specialized Hospital, Addis Ababa Ethiopia, 2019(n = 209).

Characteristic	COR (CI95%)	AOR (CI95%)
Age category		
<45	4.2 (2.6-4.9)*	2.6 (3.8-7.6)*
45-65	3.1 (2.3-4.6)*	2.4 (2.3-5.7)*
>65	0[a]	0[a]
Residence		
Urban	7.4 (4.1-13.4)*	1.5 (1.1-2.8)*
Rural	0[a]	0[a]
Types of AHT		
Tamoxifen	0.6 (0.3-0.9)*	1.6 (0.4-2.2)*
Anastrozole	0[a]	0[a]
Side effect		
Yes	0.3 (0.2-0.5)*	1.5 (0.4-1.9)*
No	0[a]	0[a]
Comorbidity		
Yes	5.9 (3.1-11.3)*	1.6 (1.5-3.4)*
No	0[a]	0[a]
Did you get thorough therapeutic communication		
Yes	10.8 (5.3-22.2)*	1.7 (1.2-3.2)*
No	0[a]	0[a]

0[a] reference category, * p-value <0.05

6. DISCUSSION

Low adherence to adjuvant hormonal treatment is a major problem in breast cancer care and little is known about factors associated that lead to low adherence to AHT. The overall proportion of women with breast cancer patients who had high adherence to AHT was found to be a quarter (26%) which the adherence rate in this study was lower than most other studies and with an average score of MMAS-8 of 6.64. The finding was slightly higher than that of Italian women with an average score of 6.18(2). Again another study done in Rome in 2014 revealed 40% nonadherence(40), this result was almost similar with 41% low adherence, and the possible reason might be due to sample size difference, socio-economic status, adherence measuring tool.

The finding of current study was lower than a study done in Singapore 40.8% (35), Brazil 76.3% (42). This finding was inconsistent with our finding the possible explanation might be sample size, different socio-economic status, having advanced technology, better care to patient, easily accessible of drugs, different adherence measuring tool. On the other hand, study done conducted in Northern California 22% (43),this finding was different this study and the difference might be due to socioeconomic status, easily accessible for care, availability of drugs. A study done in Nigeria at Lautech Teaching Hospital 2015 on non-adherence among 114 breast cancer patients who were on tamoxifen in the first year revealed that 25% of the patient were non-adherent to tamoxifen (21). This finding was inconsistent with our finding the possible reason might be treatment duration, sample size, different population, types of drug.

Factors that might be associated with adherence to AHT were assessed by ordinal logistic regression. Marital status, educational status, religion, ethnicity, occupation, income, were not significantly associated with the level of adherence to AHT, but significant association were found in age, residence, types of AHT, side effects, comorbidity and therapeutic communication with HCPs. In the current study, there was significant association with Age <45 are 2.6 times more likely to have high adherence as compared to age >65. This result was consistent with findings from study done in Scotland (45) the possible explanations might be due aging related conditions, high literacy rate.

Regarding side effects of adjuvant hormonal therapy, those respondent who reported side effect are 1.5 times less likely to be adhered as compared to those not reported and the most common side effects reported were fatigue and tiredness, joint ache or pain, nausea and vomiting, hot flushes, weight gain, and night sweat. This result was consistent with result of Nigeria (21) the possible reason might be the similar in sample size, socio-economic status, types of drug .

In the current study, regarding comorbidity, respondent those who have comorbid illnesses is likely to be highly adhered to AHT as compared to with those respondent with no comorbidity. Which was significantly associated and the common comorbidities are diabetes mellitus, HIV/AIDS, hypertension, heart Problem. Our findings was similar to that of Singapore (35), the possible explanation might be positive medication taking behavior, fear of sequel. In contrast, this finding is inconsistent with study done in Nigeria, illnesses like diabetes mellitus, hypertension, heart failure are the reason for non-adherence to tamoxifen (21). The possible explanation might be sample size, study population, severity of comorbidity.

Regarding types of AHT, in the current study, women who were on tamoxifen were 1.6 times less likely to have high adherence as compared to anastrozole. Our finding was in agreement with Singapore(35) and possible reason might be side effects. Regarding residence of respondents, those who came from urban are 1.5 times more likely to have high adherence as compared to those who came from rural area. This result was in agreement with study done in Addis Ababa, Ethiopia (8). The possible explanation might be due to low awareness, inaccessibility to treatment, high transportation cost, distant from health institution, high literacy rate.

Regarding thorough therapeutic communication; those who got it are 1.7 times more likely to be highly adhered as compared to who did not get it. This result was consistent with K.R. jacob arriola et al. (54). Study includes the discussion of tamoxifen side effects. Similarly, a study conducted by Lin et al showed that patient-providers discussion remain suboptimal (55). Our thorough therapeutic communication with healthcare providers' measure also incorporated the discussion of adjuvant hormone therapy for how long it is taken, its purpose, its side effects and way to manage.

7. STRENGTH AND LIMITATION OF THE STUDY

7.1. Strength of the study

The use of standard tool to measure the level of adherence to adjuvant hormonal therapy and content validation and reliability was done before actual data collection by expert judgments.

7.2. Limitation of the study

Firstly, lack of literature on the topic. Secondly, study as being cross-sectional in nature it didn't tell us about cause and effect relationship between various factor and adherence level. Thirdly, we used convenient sample techniques. Lastly using self-reported adherence measuring tools.

8. CONCLUSIONS AND RECOMMENDATIONS

8.1. Conclusions

In general, there was low level of adherence to adjuvant hormonal therapy was (26%) among women with breast cancer in Oncology unit of TASH. Factors like age, residence, side effects, and types of drugs, comorbidity, and getting a thorough therapeutic communication were found to be associated with level of adherence. A lot has to be done on scaling up the medication adherence of these patients so that they can comprehend the importance of prescribed therapies.

8.2. Recommendations

Health Care Providers: Should give an emphasis on rural patient and provide health education to increase patients' awareness on the benefits and side effects of the medications. They should also develop adherence counseling manual for breast cancer on adjuvant hormonal therapy. In addition, they should work on promotion of adherence to AHT including preparing of leaflets, using of mobile message technology as a reminder.

Future researcher: should use different adherence measuring tools and different study design i.e. prospective cohort study. Furthermore, they need to evaluate the impact of adherence to AHT on breast cancer outcome.

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APPENDIX

Annex A: - English version information sheet

Addis Ababa University, College of Health Science, School of Nursing and Midwifery, Department of Nursing and Midwifery, post graduate program, clinical oncology nursing

Introduction: - My name is _____. I am working as a data collector in the research conducted by Zerko Wako, who is conducting this research entitled**: "adherence to adjuvant hormonal therapy and associated factors among women with breast cancer."** for the partial fulfillment of his master of science in clinical oncology nursing specialty track in Addis Ababa University. For this study you are selected as a participant and before getting your consent or permission of your participation you need to know all necessary information related to the study. Thus, this, information will be detailed as

Objective: -to assess adherence to adjuvant hormonal therapy and associated factors among women with breast cancer attending Tikur Anbessa Specialized Hospital, Addis Ababa, Ethiopia, 2019.

Name of advisor(s): - Daniel Mengistu (Assistant professor) and Negalign Getahun (MSc.)

Name of the organization: - Addis Ababa University, College of Health Sciences, School of Nursing and Midwifery, Department of Nursing.

Name of the Sponsor: - Addis Ababa University.

Participants: -Women with breast cancer attending TASH, oncology unit.

Confidentiality: -All information you give will kept confidential and will not be accessible to any third party. You are not asked to write your name on the questionnaire sheet so that you will not be identified.

Risks: -The procedure does not bear any physical or psychological trauma on you. You will not be forced to respond to the information you do not know. However, by participating in this research project, you may feel that it is time consuming, wasting about 15-30 minutes. We hope you will participate in the study for the sake of the benefit of the research result.

Benefits: - For your participation in the study, no payment will grant. However, participating in the study and giving your information to questions asked will have great input in efforts to assess the adherence to adjuvant hormonal therapy and associated factors among women with breast cancer and the result of the study will help our patient to adhere to the recommended regimen and improve adherence level of the patient.

Right to refuse or withdraw: - Your participation is voluntary and you are not obligated to answer any question you do not wish to answer. If you feel discomfort with the question, it is your right to drop it any time you want. If you have questions regarding this study or would like to be informed of the results after its completion, please feel free to contact the principal investigator and advisor.

Person to contact:

If you have any question to ask, please contact

Principal investigator

Name: Zerko Wako

Phone No: +251964642394

E-mail:zerkowako1992@gmail.com

Annex B: English version questionnaire

S.N	Question	Response	Remark
Part I: Socio-demographic related questions			
101	How old are you?	_____(year)	
102	Where is your place of residence?	Urban ..... 1 Rural 2	
103	What is your educational status?	Able to read and write ..... 1 Unable to read and write..... 2 Primary education ..... 3 High school ..... 4 High school and above 5	
104	What is your marital status?	Single..... 1 Married ..... 2 divorced/separated..... 3 widowed..... 4	
105	What is your ethnicity?	Oromo..... 1 Amhara ..... 2 Tigre ..... 3 Gurage ..... 4 Others (specify)..... 5	
106	What is your Religion?	Orthodox ..... 1 Muslim..... 2 protestant..... 3 catholic ..... 4 Others (specify)..... 5	
107	How much is your monthly income?	_____(ETB)	
108	What is your occupation?	House wife ..... 1 Private employee ..... 2 Government employee ..... 3 Student ..... 4 Others (specify)..... 5	
109	Do you get supporter?	Yes ..... 1 No 2	If "No" skip to q111
110	If "yes" to q109, From whom do you get?	Husband ..... 1 Parent..... 2 Others 3	
111	Do you smoke cigarette?	Yes ..... 1 No 2	If "No" skip to q112
112	If "yes" for q110, how many packs/sticks per day?	_____	
113	Do you take alcohol?	Yes ..... 1 No 2	If "No" skip to q201
114	If "yes" for q112, how many L/day?		
Part II: Self-report Morisky medication adherence scale-8 questions			

201	Do you sometimes forget to take your anti-hormonal pills?	Yes ..... 1 No 2	
202	Thinking over the past two weeks, were there any days when you did not take your anti-hormonal pills?	Yes ..... 1 No 2	
203	Have you ever cut back or stopped taking your medication without telling your doctor, because you felt worse when you took it?	Yes ..... 1 No 2	
204	When you travel or leave home, do you sometimes forget bring along your anti-hormonal pills?	Yes ..... 1 No 2	
205	Did you take your anti-hormonal pill yesterday?	Yes ..... 1 No 2	
206	When you feel like your anti-hormonal medication is under control, do you sometimes stop taking your medicines?	Yes ..... 1 No 2	
207	Taking medication every day is a real inconvenience for some people. Do you ever fell hassled about sticking to your anti-hormonal treatment plan?	Yes ..... 1 No 2	
208	How often do you have difficulty remembering to take all your medications?	Never ..... 1 Rarely ..... 2 Once in a while ..... 3 Sometimes ..... 4 Always 5	
Part III: Disease and treatment-related questions			
301	Do you have family history of cancer?	Yes ..... 1 No ..... 2 I don't know 3	
302	Types of breast cancer	Ductal ..... 1 Lobular ..... 2 Other specify 3	
303	What is your stage at diagnosis?	Stage 0 ..... 1 Stage 1 ..... 2 Stage 2 ..... 3 Stage 3 ..... 4 Stage 4 5	
304	When did your menstruation stopped?	_____	
305	Hormone receptor status	Positive ..... 1 Unknown 2	
306	Laterality of the cancer	Unilateral ..... 1 Bilateral 2	

307	What types of AHT are you taking?	Tamoxifen ..... 1 Anastrozole..... 2 Others 3	
308	Date of initiation of medication?	_____	
309	Do you experience side effects?	Yes ..... 1 No 2	If "No" skip to q311.
310	If "Yes" to q309 what are the side affects you are facing?(you can provide multiple response)	Nausea/vomiting..... 1 Fatigue/tiredness..... 2 Loss of libido ..... 3 Sleep disorders ..... 4 Arthralgia ..... 5 Musculoskeletal pain ..... 6 Vaginal bleeding ..... 7 Body weight increased ..... 8 Difficulty of concentration ..... 9 Others specify 10	
311	How much it cost to buy the medicine per month?	_____	
312	The types of payment used	Free of charge ..... 1 Health insurance/third party..... 2 Out-of-pocket money 3	
313	For how long have you been visiting for the therapy?	_____	
314	Is there a time you come for refilling medication and did not get it?	Yes ..... 1 No 2	If "No" skip to q316.
315	If "Yes" to q314, what was the reason?	_____	
316	Did you get a thorough therapeutic communication from health care provider?	Yes ..... 1 No..... 2	
317	How many hours/ days it takes to come to this hospital by available means from your home?	Hours……. Days……	
318	Did you get any cancer treatments previously?	Yes ..... 1 No..... 2	If "No" skip to q323.
319	Chemotherapy	Yes ..... 1 No..... 2	
320	Surgery	Yes ..... 1 No..... 2	
321	Radiotherapy	Yes ..... 1 No..... 2	
322	If "yes" to q320, what is type of surgery you received?	Lumpectomy ..... 1 Mastectomy ..... 2 Others specify 3	

323	Do you have other health condition?	Yes ..... 1 No..... 2	If "No" skip to q325.
324	If "Yes" what is the disease (multiple option is possible)?	Diabetes mellitus ..... 1 Heart problem ..... 2 HIV/AIDS ..... 3 Respiratory problem ..... 4 Other specify 5	
325	How many days you forget taking your medication in the past two weeks?	_____	

THANK YOU FOR YOUR COOPERATION!

Annex C: Amharic version Information sheet

አዲስ አበባ ዩኒቨርሲቲ፣ የጤና ሳይንስ ኮሌጅ ፣ የነርሲንግ እና የሚድዋይፈሪ ትምህርት ቤት፣ የድሕሬ ምረቃ ፕሮግራም፣ የክሊኒካል ኦንኮሎጂ ነርሲንግ ፡፡

መግቢያ ፡ - ስሜ _____ ነው.የምርምሩ ባሌበት ተማሪ ዘርቆ ዋቆ እኔ ደግሞ የዚህ ምርምር መጠይቅ ሰብሳቢ ነኝ፡፡የምርምሩ ርዕስ "በጡት ካንሰር ሴቶች የተጨማሪ ሆርሞናል ቴራፒ በትክክል መወሰዱን እና ተያያዥ ነገሮች ለማወቅ ይሆናል" በአዲስ አበባ ዩኒቨርሲቲ በማስተርስ ሳይንስ በክሊኒካል ኦንኮሎጂ ነርሲንግ ልዩ ትራክ ውስጥ በከፊል በማሟላት ላይ ይገኛል፡፡ እርሶ ለእዚህ ጥናት እንደተሳታፊ ተመርጠዋል እና ስምምነትዎን ከማግኘትዎ ወይም ከእርስዎ ተሳትፎ በፊት ከምርምር ጋር የተዛመደ አስፈላጊ መረጃ ሁሉ ማወቅ አለብዎት ስለዚህ መረጃው እንደሚከተለው ይብራራል

አላማ፡ - በጥቁር አንበሳ ስፔሻ ሆስፒታል ለክትትል ለምመጡት በጡት ካንሰር ሴቶች የተጨማሪ ሆርሞናል ቴራፒ በትክክል መወሰዱን እና ተያያዥ ነገሮች ለማወቅ ይሆናል፡፡

አማካሪስም፡ ዳንኤል መንግስቱ (ረዳት ፕሮፌሰር) እና ነጋልኝ ጌታሁን (MSc.) ፡፡

የድርጅቱ ስም፡ አዲስ አበባ ዩኒቨርሲቲ, የጤና ሳይንስ ኮሌጅ , የነርሲንግ እና የሚድዋይፈሪ ትምህርት ቤት

የስፖንሰር ስም፡ አዲስ አበባ ዩኒቨርሲቲ

ተሳታፊዎች፡ የጡት ካንሰር ያላቸው ሴቶች በጥቁር አንብሳ ስፔሻሊስት ሆስፒታል ውስጥ በመከታተል ላይ የሚገኙ ናቸዉ፡፡

ሚስጢራዊነት፡ የሚሰጡት መረጃ በምሥጢር ተጠብቆ እንዲቆይ ይደረጋል እና ለማንም ሶስተኛ ወገን አይደረስበትም፣ በመለያ መጠይቁ ላይ ስምዎን አይፃፍም፡፡

ስጋቶች፡ ሂደቱ ምንም አይነት አካላዊ ወይም ስነልቦናዊ ቀውስ አይፈጥርም፣ እርስዎ አያውቁም መረጃ ምላሽ ይገደዳሉ አይደረግም፣ ይሁን እንጂ በዚህ የምርምር ፕሮጀክት ላይ በመሳተፍ ጊዜው 15 እስከ 30 ደቂቃዎች እንደሚበልጥ ይሰማዎታል ፣ ለጥናቱ ውጤት ጥቅም ሲባል በጥናቱ ውስጥ እንደሚሳተፉ ተስፋ እናደርጋለን ፡፡

ጥቅማ ጥቅሞች፡ ለጥናቱ በተሳተፉበት ወቅት ምንም አይነት ክፍያ አይሰጥም፣ ሆኖም ግን በጥናቱ ላይ መሳተፍ እና ለተጠየቁ ጥያቄዎች መረጃዎን ለመገምገም ከፍተኛ ጥረት ይኖራቸዋል ስለዝህ የጡት ካንሰር ሴቶች ተጨማሪ የሆርሞናል ሕክምናዉን በትክክል እና ተያያዥነት ያላቸው ነገሮች ማወቁ ጤንነታቸዉን ለማሻሻል ይረዳሃል

የመቃወምና የመተው መብት፡ የእርስዎ ተሳትፎ በፈቃደኝነት ነው እናም እርስዎ ለመመለስ የማይፈልጉትን ማንኛውም ጥያቄ ለመመለስ ግዴታ የለብዎትም፣ በጥያቄው ላይ ማመቻቸት ካልተሰማዎት በፈለጉት ሰዓት ላይ መተዉ መብትዎ ነው፡፡ ይህንን ጥናት በተመለከተ ጥያቄ ካለዎት ወይም ከጨረሱ በኋላ ስለውጤቶቹ መረጃ እንዲሰጥዎት ከፈለጉ እባክዎን ዋናውን መርማሪን እና አማካሪዎን ያነጋግሩ .

የሚናናግሮ ሰው:

ማናቸውም ጥያቄ ለመጠየቅ, እባክዎን ያነጋግሩ

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Annex D. Amharic version questionnaires

ክፍል አንድ፡ ማህበራዊ እና ስነ-ሕዝብ ተዛማጅ ጥያቄዎች			
ቁ.	ጥያቄዎች	ምላሽ	ማስታወሻ
101	እድሜዎት ስንት ነው?	_____ (በዓመት)	
102	የመኖሪያ ቦታ የት ነዉ?	ከተማ ..... 1 ገጠር 2	
103	የትምህርት ደረጃዎ ?	ማንበብ እና መጻፍ የማይችል ..... 1 ማንበብ እና መጻፍ የሚችል ..... 2 አንደኛ ደረጃ ..... 3 ሁለተኛ ደረጃ ..... 4 ሁለተኛ ደረጃ እና ከዛበላይ 5	
104	የጋብቻ ሁኔታዎ?	ያላገባች ..... 1 ያገባች ..... 2 የተፋታች / የተለያየች.... 3 ባለ የሞተባት ..... 4 ሳይጋቡ አብሮ የሚኖሩ ... 5	
105	ሃይማኖትዎ ምንድን ነው?	ኦርቶዶክስ ..... 1 ሙስሊም ..... 2 ፕሮቴስታንት..... 3 ካቶሊክ ..... 4 ሌሎች (ይግለጹ) 5	
106	የእርስዎ ብሄር ምንድ ነው?	ኦሮሞ ..... 1 አማራ ..... 2 ትግሬ ..... 3 ጉራጌ ..... 4 ሌሎች (ይግለጹ) 5	
107	የሥራዎ ሁኔታ?	የቤት እመቤት ..... 1 የግል ሰራተኛ ..... 2 የመንግስት ሰራተኛ ..... 3 ተማሪ ..... 4 ሌሎች (ይግለጹ)..... 5	
108	የእርስዎ ወርሃዊ ገቢ ምን ያህል ነው?	_____(ብር)	
109	ድጋፍ ታግኛለሽ ዎይ?	አዎ ..... 1 አይ 2	"አይ" ካለዎት ወደ ጥ.ቁ111
110	ለጥያቄ ቁ109 "አዎ" ካለዎት ከማን ድጋፍ ታግኛለሽ?	ከባለቤቴ..... 1 ከወላጆቼ ..... 2 ከለሎች (ይግለጹ)..... 3	

111	ሲጃራ ታጨሳለሽ ዎይ?	አዎ .....1 አይ 2	"አይ" ካለዎት ወደ ጥ.ቁ112
112	ለጥያቄ ቁ110 "አዎ" ካለዎት በቀን ስንት ጥቅሎች/ፍሬዎች?	_____	
113	አልኮል ትወስጂያለሽ?	አዎ .....1 አይ 2	"አይ" ካለዎት ወደ ጥ.ቁ201
114	ለጥያቄ ቁ112 "አዎ" ካለዎት በቀን ስንት ሊትር?	_____	
ክፍል ሁለት: የMorisky መድሃኒት ክትትልን ተዛማጅጥያቄዎች(Tamoxifen or Anastrozole)			
ቁ.	ጥያቄዎች	ምላሽ	ማስታወሻ
201	አንዳንድ ጊዜ የፀረ-ሆርሞን መድሃኒትዎን ሳይወስዱ ረስቶ ያዉቃሉ?	አዎ .....1 አይ 2	
202	ባለፉት ሁለት ሳምንታት ዉስጥ የፀረ -ሆርሞን መድሃኒትዎን ያልወሰዱባቸው ቀና ትነበሩ?	አዎ .....1 አይ 2	
203	ለሐኪምዎ ሳይገለጹ የፀረ-ሆርሞን መድሃኒቱን መውሰድ ያቆሙበት ጊዜ አለ?	አዎ .....1 አይ 2	
204	በጉዞ ሰዓት ወይም ከቤት ስትወጡ, አንዳንድ ጊዜ የፀረ-ሆርሞን መድሃኒትዎ ይረሳሉ?	አዎ .....1 አይ 2	
205	ትናንትና የፀረ-ሆርሞን መድሃኒትዎን ወስደዋል?	አዎ .....1 አይ 2	
206	የፀረ-ሆርሞን መድሃኒቱን እየወሰዱባሉበት ሰዓት ህመሙን ተቆጣጥሮልኛል በማለት ለማቆም ሞክሮ ያቃሉ?	አዎ .....1 አይ 2	
207	በየቀኑ የፀረ-ሆርሞን መድሃኒቱን በትክክል እንዳይ ወስዱ ጫና የምፈጥርቦት ነገር አለ?	አዎ .....1 አይ 2	
208	የፀረ-ሆርሞን መድሃኒቶችዎን በሚውስዱበት ጊዜ የመዘንጋት ወይም የመርሳት ችግር አጋጥሞታል ወይ?	በጭራሽ.....1 አልፎ አልፎ.....2 ከስንት አንዴ.....3 አንዳንድ ጊዜ .....4 ሁልጊዜ 5	
ክፍል ሶስት፡ በሽታ እና መድሃኒት ተዛማጅ ጥያቄዎች			
301	ከቤተሰቦት ካንሰር ታሞ ምያቅ አለ?	አዎ አለ.....1 የለም .....2 አላወኩም 3	

302	የጡት ካንሰር ዓይነቶች	ዳክታል.....1 ሎቡላር.....2 ላለአይነት (ይግለጹ).....3	
303	በምርመራው ወቅት የካንሰር ደረጃ	ደረጃ 0 .....1 ደረጃ 1 .....2 ደረጃ 2 .....3 ደረጃ 3 .....4 ደረጃ 4 5	
304	የወር አበባሽ የቆመዉ መቼ ነው?	_____	
305	የሆርሞን ሁኔታ ወይም አይነት	ፖዝቲቭ .....1 የማይታወቅ 2	
306	የትኛዉ ጡትሽ ነዉ የታመመው?	አንዱ.....1 ሁለቱም 2	
307	የትኛው የሆርሞን ቴራፒ ነው ያገኙት?	ታሞክሲፊን .....1 አናስቲራዞል .....2 ሌሎች ይለዩ 3	
308	መቼ ነው መድኃኒቱን መዉሰድ የጀመሩት	_____(ዓመት)	
309	የጎንዮሽ ጉዳቶች አጋጥሙዎታል?	አዎ .....1 አይ 2	"አይ" ካለዎት ወደ ጥ.ቁ311
310	ለጥያቄ ቁ309 "አዎ" ካለዎት ከጎንዮሽ የትንኞቹ ነዉ? (ከአንድ በላይ መልስ መስጠት ይችላሉ)	ማቅለሽለሽ/ማስታወክ .....1 የድካም ስሜት .....2 የፍላጎት ማጣት .....3 የእንቅልፍ መዛባት .....4 የመገጣጠሚያ ህመም .....5 የአካል ጡንቻዎች ህመም6 የብሊት ደም መፍሰስ .....7 የክብደት መጨመር .....8 የማስታወስ ችግር.....9 ሌሎች ካሉ ይግለፁ 10	
311	በወር ለመድሃኒቱ መግዣ ምን ያህል ብር ያወጣሉ?	_____(ብር)	
312	መድኃኒቱን ለመግዛት የአከፋፈል አይነት	በነፃ (ዲጋፍ ከቀበሌ).....1 በጤና መድህን/ሶስተኛ ወገን.....2 ከኪስ ገንዘብ 3	
313	ሕክምና ክትትሎት ስንት ጊዜ (ዙር) ሆኖታል?	_____	
314	በዚህ ሆስፒታል ውስጥ መድሃኒቱን ለመሙላት መጥቶ ሳይውስዱ ተመልስዉ ያቃሉ?	አዎ .....1 አይ 2	"አይ" ካለዎት ወደ ጥ.ቁ316.
315	ለጥያቄ ቁ316 "አዎ" ካለዎት ምክንዓቱ ምን ነበር?	_____	

316	ከጤና ባለሙያዉ ስለ ሕክምና አገልግሎቱ የተሟላ ማብራርያ አግኝተዋል?	አዎ ..... 1 አይ..... 2	
317	በተቻለ መጠን ከዚህ ሆስፒታል ለመድረስ ስንት ሰዓታት ወይም ቀናቶች ይፈጅቦታል?	_____ሰዓታት _____ቀናት	
318	ከዚህ ቀደም ማናቸውም አይነት የካንሰር ሕክምና አግኝተዋል?	አዎ ..... 1 አይ..... 2	"አይ" ካለዎት ወደ ጥ.ቁ323
319	ኬሞቴራፒ	አዎ ..... 1 አይ..... 2	
320	ቀዶ ጥገና	አዎ ..... 1 አይ..... 2	
321	ጨረር ሕክምና	አዎ ..... 1 አይ..... 2	
322	ከጥያቄ ቁ320 ጋር ተያይዞ የቀዶ ጥገና አይነት ምን ነበር?	የላምፔክቶሚ ..... 1 የማስቴክቶሚ..... 2 ሌሎች (ይግለጹ)..... 3	
323	ሌላ የጤና ችግር አለብዎት?	አዎ ..... 1 አይ 2	"አይ" ካለዎት ወደ ጥ.ቁ325
324	ለጥያቄ 323 "አዎ" ካለዎት በሽታው ምንድን ነው?(ከአንድ በላይ መልስ መስጠት ይችላሉ)	የስኳር በሽታ ..... 1 የልብ በሽታ..... 2 ኤች አይ ቪ / ኤድስ .... 3 የሳንባ በሽታ ..... 4 ሌሎች (ይግለጹ)..... 5	
325	ባለፉት ሁለት ሳምንታት ዉስጥ መድሃኒትዎን ያልወሰዱባቸው ስንት ቀና ነው?	_____	

ለትብብርዎ እናመሰግናለን!